

CLAIMS

What is claimed is:

1. A slowly implantable electrode.
- 5 2. The electrode according to claim 1, wherein said electrode comprises a MEMS electrode.
3. The electrode according to claim 1, wherein said electrode comprises a shape-memory polymer coated electrode.
4. The electrode according to claim 3, wherein said polymer is
10 bioresorbable.
5. The electrode according to claim 3, wherein said electrode further includes an anti-glutamate coating on an exterior surface of said electrode.
6. The electrode according to claim 1, wherein said electrode further includes an immunosuppressant coating on an exterior surface of said
15 electrode.
7. The electrode according to claim 1, wherein said electrode is coated by a bioresorbable coating.
8. The electrode according to claim 1, wherein said electrode is surface engineered.
- 20 9. A coating for an electrode, said coating comprising a shape-memory polymer.
10. The coating according to claim 9, wherein said polymer is bioresorbable.
11. The coating according to claim 9, wherein said coating further
25 includes an anti-glutamate coating on an exterior surface of said electrode.
12. The coating according to claim 9, wherein said coating further includes an immunosuppressant coating on an exterior surface of the electrode.
13. The coating according to claim 9, wherein said coated is surface engineered.
- 30 14. A method for inserting an electrode into tissue by inserting the electrode of claim 1 into brain tissue.
15. The method according to claim 14, wherein said inserting step includes inserting the electrode into tissue and slowly resorbing the coating into

the brain.

16. The method according to claim 14, wherein said inserting step includes slowly inserting the electrode.

17. The method according to claim 14, further including surface
5 engineering the electrode.

18. A method of minimizing trauma and astrocytic scarring by inserting the electrode of claim 1 into body tissue.

19. The method according to claim 18, wherein said inserting step includes inserting the electrode into body tissue and slowly resorbing the coating
10 into the tissue.

20. The method according to claim 18, wherein said inserting step includes slowly inserting the electrode.

21. A slowly implantable electrode formed using MEMS technology.

22. A slowly implantable electrode formed by coating an electrode with
15 shape-memory polymers.

23. A coating for an electrode, said coating comprising a bioresorbable coating.

24. A slowly implantable electrode formed by coating an electrode with a bioresorbable coating.

25. An electrode for limiting micromovement *in vivo*, said electrode comprising an electrode and a bioresorbable coating on the exterior surface of said electrode.
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26. A coating for limiting micromovement, said coating comprising a bioresorbable coating for placement on the exterior surface of an electrode or
25 array backing.